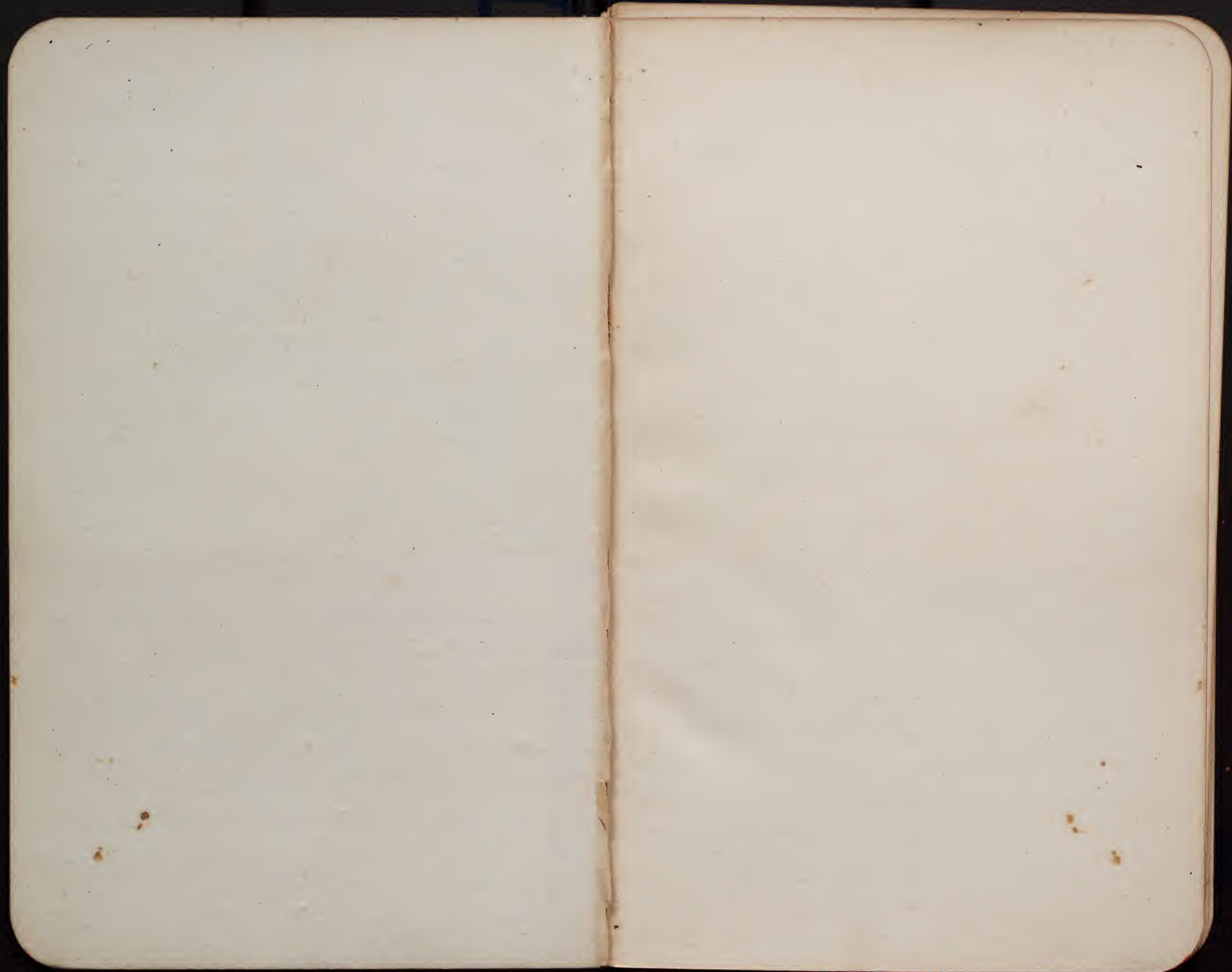
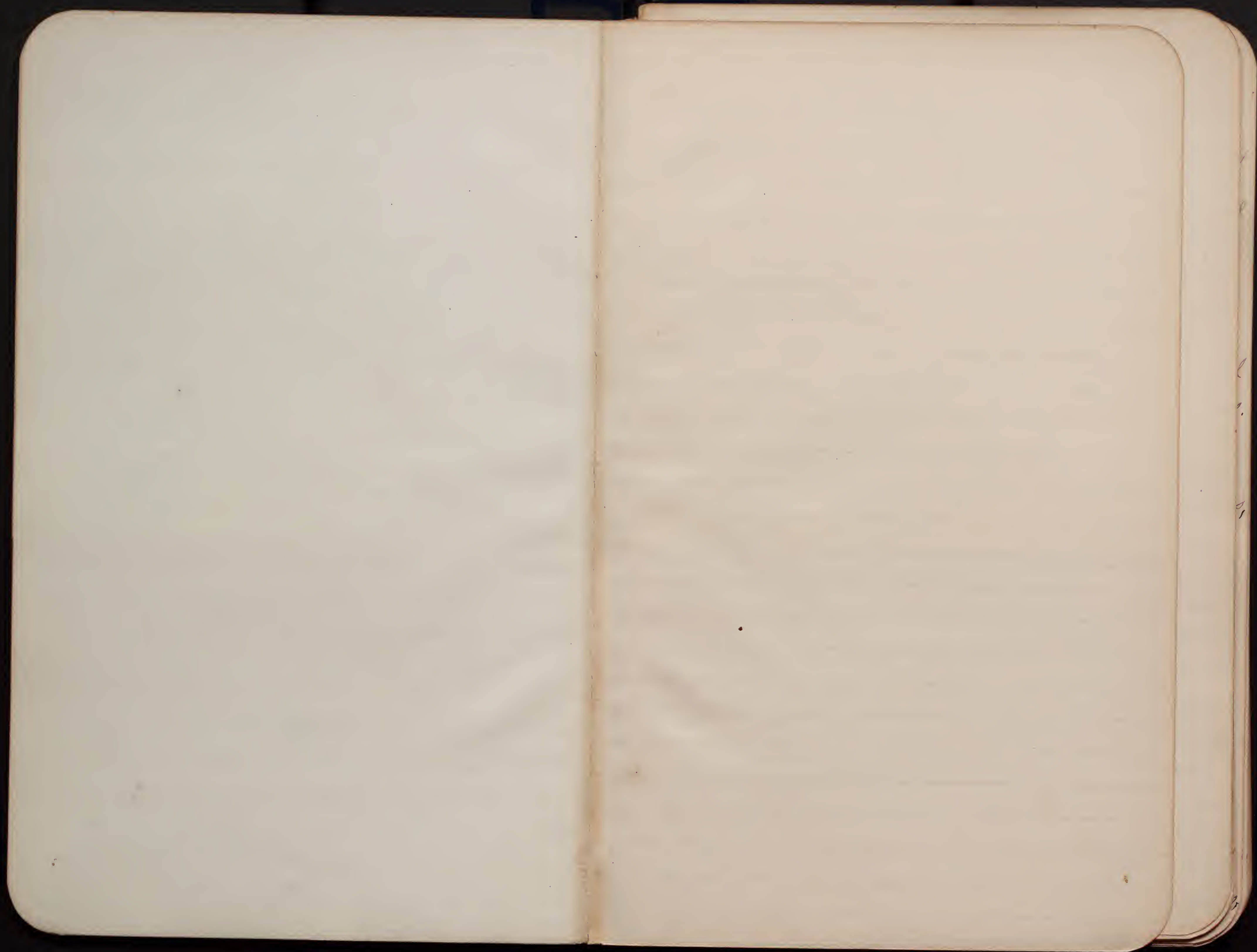
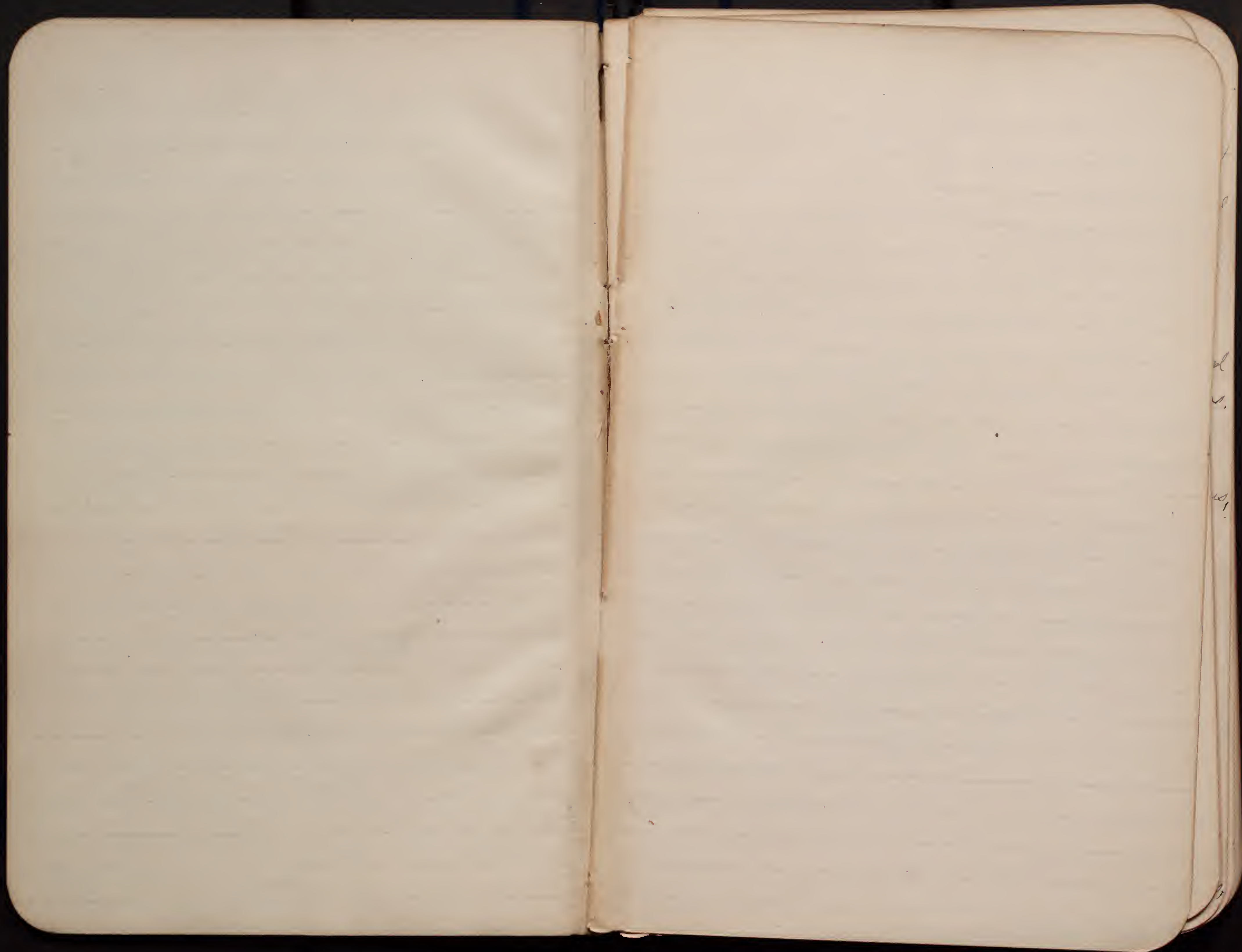


Journal
1883

Wm. S. S. S.







June 19 Got an Indian to take
me down to the Indian Agency
18 miles from Wadsworth on the east
side of the river 3 miles above where
it enters Pyramid Lake. and 6 miles
from Winnemucca Lake. Winnemucca
lake is known to all the people here as
Mud Lake. Followed down the
valley on west side of river & crossed
near the agency. Saw lots of Pelicans,
hundreds of *S. wallis*, 3 or 4 *S. lucurus*
& lots of lizards & horned lizards. Saw
Crotaphytis, *Calisaurus*, *Cnemidophorus*,
& a little *Sceloporus*. Got specimens
of all near the agency & killed some
S. wallis & *S. lucurus*. Caught one
Thomomys.

There is snow on some of the Mts.
around. The valley is not very large
& all around are Mts., desert ranges.
Plants are all desert species. such
as *Atriplex confertifolia*, *Sarcobatus vermicularis*,
Atriplex canescens, & *Torreyi* (?), *Suaeda*
Lycium (Andersoni ?), *Tetradlea canescens*,
spinescens, *Artemisia tridentata*, & *spinescens*,
Cottonwoods & willows grow on the flats.

Pyramid Lake, Nev.

June 20 Caught nothing in the traps set over night. Could find ~~not~~ no tracks or signs of *Dipodomys* or *Perodipus* in morning before *Spermophilus mollis* had come out. Made up yesterday's specimens and in afternoon went down to Pyramid Lake. Mountains rise from edge of lake part of the way. Some wide sand flats & great marshes of junco & salt grass & other sedges & grass. High, rock islands in the lake look like pyramids & give the lake its name. Near shore the water was muddy. Out away the waves looked a brilliant green.

There were fully 200 pelicans sitting along the shores near the mouth of the river. I never saw such a sight of big birds before. Saw dozens of hawks but killed only one. Killed 2 *S. leucurus* & saw a lot more. A very pleasant day.

Could find no signs of *Dipodomys* in the sand dunes around lake. Set some traps there but expect to catch only *S. mollis* which swarms.

Pyramid Lake

June 21 Caught over each of *Perodipus* & *Dipodomys*. Set a lot more traps for them. Have to set traps just at dark so the *Spermophilus* won't get in them. Got 2 Bats in evening. A warm day.

June 22 Caught a *Dipodomys* & 3 *Perodipus* & a *Perognathus*, shot 2 Rabbits, 2 *S. leucurus*, 3 Hawks, some lizards & a snake. Went down to lake. Killed 3 Bats. Cool & windy.

June 23 Caught a *Dipodomys* & some other things. Afternoon over to a cañon across on west side of valley but found very little of interest. Got some lizards. Found the little wild peach & a *Felugia* & junipers.

June 24 Went down to the lake, (Pyramid Lake) got a boat of an Indian and went to the big island near middle of lake. It is about 10 miles from the south end of lake & at the nearest point about a mile from shore. Is rocky, about 500 feet high and half a mile across. An old shoreline 50 to 100 feet above lake forms

Pyramid Lake

a wese part of the way around.

Found no birds breeding on it now, though Pelicans & gulls have bred there in great numbers. Found old nests.

Pepple said there were swarms of Rattle snakes on the Island but I found only 3 Utaries & 3 species of lizards.

Spiders were exceedingly numerous.

Thomomys hills & evidently Perognathus holes were common & Neotoma signs were seen in caves.

Vegetation is dry, but there is ~~lots of~~ some bunch grass & Alfalfa. Goats have been put on the island & I saw a few tracks & trails. Got some shells.

A good stiff breeze helped me in rowing back but made pretty big waves.

June 25 Sunday. There was one

Dipodomys in my traps

Went to S.S., took a tray of mammals and talked to about 80 Indians & a dozen white people about mammals.

To Wadsworth

June 26 Caught some new things & made up skins. Found I could go to Wadsworth in afternoon so hurried up & packed specimens & packed my trunk & started at 3:30. Got mail at Wadsworth & wrote letters in evening, took a 10 P.M. train for Elko.

June 27 Arrived at Elko before breakfast. Tramped around a little & then wrote on my report till noon. In P.M. took traps & set for Microdipodops. Found some tracks that I thought were threes but guess they were of young Perodipus. Set 50 traps.

June 28 Went to traps early. got a Perodipus, 3 Onychomys, 6 Sitomys, & 2 Tameias minimus. Took up traps & took 7:20 A.M. train for Halluck. Made up specimens & in P.M. set 50 traps for Microdipodops & 6 for Lepus idahoensis. Caught 2 Microdipodops in my traps. Learned something of their habits. Saved one alive.

Hallick

June 29 Caught 3 *Microdipodops*, 1 *Perognathus*, 1 *Onychomys*, 3 *Sitomys sonoriensis*, 15 *Tamias m. pictus*, shot an *S. mollis* & 3 *Lepus idahoensis*. Made up 16 skins & one bird, reset 61 traps, mostly for *Microdipodops*.

Weather pleasant, nights cool & days not too hot. Wasquitoes bad towards night. Too cold for them nights.

June 30 Got 4 *Microdipodops*, 3 *Perognathus*, 3 *Sitomys*, 6 *Tamias*, a *Thomomys* & an adult *Lepus idahoensis*. Made up 14 skins. Reset & baited all my traps after 4 o'clock. Then went to them after sundown, from 7:45 to 8:15, and found the bait had been taken from nearly all of them by ants. Rebaited them. Found 3 *Perognathus* in the traps from 7:50 to 8. Sun sets at 7:12. A worm is killing the sagebrush & *Tamias minimus* is living on the worm. Have 70 traps set.

July 1 Caught 5 *Microdipodops* & 2 *L. idahoensis*. Made up 18 skins.

Hot day, up to 90°+.

mammals taken at Hallick

~~June 28~~

Microdipodops, June 28, 2, 29, 3, 30, 4, July 1, 5, 2, 3, 3⁴, 4th

Tamias minimus, " " #, " 15 " 4 " 8 7 4 2

S. mollis 2 4 5 1 1

Pterognathus fasciatus 3 4 6 5 9

" olivaceus 2 1

Lepus idahoensis 3 1 2 1 1 2

Sitomys 3 3 3 2 1 2

Onychomys 1

Thomomys 1 3

134

July 2 Sunday, found 3 Microdipodops & one Lepus idahoensis in the traps.

besides some Pterognathus, Tamias & Sitomys.

July 3 Got 4 microdipodops & a young L. idahoensis & caught 3 of the big Thomomys.

Finished & sent my Pyramid Lake report.

July 4 Caught 2 Microdipodops and 2 Lepus idahoensis and 9 Pterognathus & no Thomomys. Made up 15 skins and 2 skulls & one bird. Packed a box of specimens, packed my things, took up traps and left Hallick at 7:42 P.M. Found I would have to take two days for the trip to the Mts. so gave it up.

July 5 Reached Ogden in morning. Got no mail of account. Looked over wagons and inquired about horses. Went down to Farmington and staid the rest of the day. Went up the Mts. back of Farmington but found no Tamias.

July 6 Went to Salt Lake City
and studied wagons till time
for the train to Park City, then to
Park City for *S. castaneus* skeletons.
Did not arrive till 7 P.M. & it
was then too late for the squirrels -
In coming along the R.R. I saw
dozens of *S. arvatus* from below
the Halfway House up to Park City.
They are as numerous as was
S. elegans through Wyoming, but not
so numerous as *S. mollis* at
Pyramid Lake. I think they are four
times as numerous as when I
was here 3 years ago yesterday.
Saw a Lewis Woodpecker (*M. torquatus*)
just before reaching Park City.
Am perfectly sure of the species. It
flew slowly past the train, showing
the tawny sides and black back
perfectly plainly.
A cold evening at Park C -

July 7 Started up the mountain early and at 6 o'clock saw the first *Spermophilus castaneus*, killed it and two more & a *S. arizonae*, returned to hotel, got breakfast and took the 8 AM train for Salt Lake, where I arrived at 10:35 and had to wait till 6:30 for a train to Ogden.

Looked over the wagons in Salt Lake City and wrote letters.

Reached Ogden in evening and stopped at the European Hotel.

Got a telegram but was too late for mail. Cold in morning at Park City. Had to wear gloves & all the clothes I had along. Saw a *Melospiza torquatus* in the same place where I saw it last night.

July 10 Set traps on South side of river and caught one *Perognathus olivaceus* in my hands. Looked up horses and picked out a buckboard and had additions put on it.

Looked at more horses

Ogden -

July 11 Loring went to traps & got our *Perodipus*. Spent most of the day in picking out and trying horses. Got a pretty good team for \$75. and Loring got a saddle horse for \$25. Had them shod. Found a man that I guess will do.

July 12 Moved our outfit down to Stakers farm and camped.

July 13 Went up Ogden Cañon to ~~Paradise~~ ^{Eden} 10 miles from Ogden. Saw some *Spermophilus arwatus*, but no other new mammals for the locality. Came back in time to set out a lot of traps. Loring killed a big gull on Weber River.

July 14 Went after my saddle horse and then got him and Loring's horse shod. Set traps in evening. Caught some *Perognathus* and *Perodipus* in morning.

Ogden - + Northward

July 16 Sunday. Got some *Perognathus* and *Perodipus*. Our best team horse got kicked and is lame.

July 17. Packed up and moved up the valley to near Hot Springs. Our horse was too lame to walk so we got another horse and left it. Will send back for it again in a few days.

July 18. Went past Hot Springs about a mile and turned up to a cañon above Chamberlains ranch and camped. Set traps up the cañon.

July 19 Caught only a *Neotoma cinerea* and shot some *Tamias dorsalis* + birds. Evening went back to Ogden and found our horse still too lame to travel so traded her for the one we borrowed. Now we are all ready to push on to Bear Lake.
A hot day.

Brigham to Wellville

July 20 Started from camp at 8 A.M. and followed up valley 12 miles to Brigham, killed a Cottontail and saw some Jack Rabbits. From Brigham turned east and followed Boxelder Creek up through the cañon to the little town of Mantua, then turned to the north and crossed the divide of the Range and struck down another creek to Cache Valley and camped at Wellville. Came about 30 miles. The divide was not high and a good road all the way. Near the summit we killed a *Tamias minimus* and just on the west slope of summit killed 3 *S. arvatus*. Mantua is in a pretty mountain park but sheep have eaten the hills all around here. We crossed a summit with a basin and little lake between. On 15 Herring Gulls in the lake we killed one and found its stomach full of crickets.

Along the creeks the principal trees and shrubs are *Acer glaberrimus*, *Populus angustifolia*, willow, Alnus, Sambucus.

Betula occidentalis, *Cornus*, *Vegulus aceroides*, *Amelanchier*, rose,

On the side hills are *Lupinus*, *simel*, *Cercocarpus*, *Cowanina*

Wellsville to

July 21 Cache Valley is 8 or 10 miles wide at this point. It appears to be a very long valley, extending out of sight both ways. It is well supplied with water, Little Bear River running through it and numerous side side streams coming down from the cañons. Most of the valley is cultivated. Houses & towns are numerous. It is the best valley I have seen in Utah.

Bearing to the east we crossed the valley and passing through Hyrum we struck into Blacksmiths Fork Cañon and followed up it about 8 or 10 miles and camped.

Found a fairly good road and easy grade. The cañon is narrow and the sides high so there is little fertile land in it. 2 or 3 little ranches. A good sized stream comes down it, some 40 feet wide and 2 feet deep and very rapid. The wts. along each side are not very high. Sheep have eaten off most of the grass. Douglas spruce covers the upper slopes and comes down into the cañon in places. Juniper and *Arceuthobium* and a *Ceanothus* or *Forsythia* are common. *Betula occidentalis* + *Populus angustifolia* and Willows, *Alnus*, *Amelanchier*, *Crataegus*.

Prunus ~~*americana*~~ ^{*virginiana*}, & *Cercocarpus* ^{*parvifolius*} fill the bottom of the Cañon along the stream. *Populus tremuloides* & *Cercocarpus ledifolius* & Spruce & Willow and *Ceanothus* grow on the slopes. We camped at a nice little meadow by the creek, camped early and climbed up the ridge but found nothing of account. Saw lots of Deer tracks and Long shot 3 Bluegrouse. Killed & made up a *S. armatus*. Saw 2 *S. grammurus* at lower end of cañon near toll gate. Did not strike *Armatus* till we camped. Killed one bat. Set some traps. Did not have time to catch any fish. Saw one *Tamias*, probably *minimus*, others heard. Saw *Lynx* tracks. A hot day. A thunder storm passed near us in P.M.

Amelanchier berries are abundant in the cañon and the largest & nicest I ever saw. Yellow currants are also abundant. Came about 18 or 20 miles.

Wahsatch Mts.

July 22 Caught 2 *Perognathus* & 2 *Neotomas*.
Loing got 2 *Neotomas*. Lynxes took the
bait from our traps & tracked all along
the road. Started early & followed up
Blacksmiths Fork to head of cañon, about
5 miles, then turned to the north and
climbed over long slopes up & up, then
down to another branch of Blacksmiths
fork, then over another ridge & down
to another little stream that was
nearly dry and camped. We are
probably still 10 miles S.W. of Laketown.
Should think our altitude was about 9000.
In coming up the cañon we saw *Tamias*
dorsalis & lots of *S. arizonae* & 5 *Arctomys*
& 3 *Tamias* & *castaneus*. Loing killed
an *Arctomys* & 2 *castaneus*. *Tamias*
minimus was common most of the way &
we killed what we wanted. Shot 8 *Perdix*.
The young are about half grown. We missed
most of them. We each killed a Pine Squirrel.
Saw Bear signs. Some other fellows saw a
Bear about a mile from our camp.
Killed some new birds. Set a few traps, made
skins. Hunted a little. Rained a little in P.M.
Sheep have eaten up the country.

July 23 Sunday - Caught nothing in the few traps we had set. Went for a long ride over the ridges and saw some Bear signs, saw where one had gnawed the bark off a popple and rubbed some brown hair off on another tree.

Saw a lot of Sage hens and killed 3 old ones. They are good and do not taste of sage. Some familiar plants are common here around camp. *Potentilla fruticosa*, *Fragaria speciosa*, *Pentstemon barbatus*, and *Gilia agnosta* besides *Artemisia tridentata*. *A. cana* & *A. trífida* are common. *Fragaria glauca* and *Amelanchier* are common.

Pseudotsuga douglasii and *Abies (concolor?)* are the only conifers seen. *Juniper* & *Ascarpus* and *Populus tremuloides* and *Acer glaberrimum* are the principal trees.

There are lots of grassy park-like meadows but the grass is short and gnawed down by cattle and sheep. Where sheep have run the ground is mostly bare of grass & small plants.

A cold night and frosty morning.
A cool day & cold evening.

July 24 Got an early start and came down to Laketown, 12 miles, and camped at south end of Bear Lake. Came through a park and over another divide, then followed down Cottonwood Creek to the lake.

Passed some better places to camp and collect than we had seen before, but did not stop. There were some deep cañons full of timber and splendid grass all over the high part of the range.

Passed a camp of Shoshone Indians with a lot of venison drying and some deer tongues and hides hanging up.

Passed a good deal of *Pinus monophylla* but no other pines. Spruces and other trees as before. We came down a not very steep slope along Cottonwood Creek for about 8 miles. Probably did not come down more than 2000 feet. Bear Lake is just 6000. Was much pleased to find my aneroid at the P.O.

Shot a big weasel just as we started and shot some half-grown Sage Grouse.

Struck *Populus angustifolia* again when half way down the slope. Set traps & shot a *Peromyscus*.

July 25 Caught one Fiber, 1 Mink, 4 Arvicola longicauda, 4 Sitomys, 2 Tamias, 25. Arctomys, Loring got a Fiber & a Mus musculus and shot some birds & a bat.

Made up skins. A cool day and rain in the Mts. around.

Bear Lake is a lovely sheet of blue water surrounded by mountains. It is about 30 miles long. The Mts. east of it are low and sprinkled over with junipers. Those on the west — Bear Lake Mts. — are higher and covered at the summits with heavy coniferous forests, wherein are several saw mills and rails & logs are hauled down from them. The people of Laketown are all Mormons. Yesterday they were all out to the grove celebrating the 24th of July — Pioneer day — The day on which Brigham Young & party reached Salt Lake Valley in 1847.

July 26 Caught a few things & made them up in forenoon. In P.M. made out our report for the trip from Ogden & for Laketown.

Bear Lake

July 27 Picked up our traps and started north before 6 o'clock. Followed up the east side of Bear Lake to a big spring some 6 miles north of the end of the main lake and camped. Followed the lake shore all the way. Passed several ranches. Killed 2 *Arctomys* and 7 *S. castaneus* on the rocks near the lake. Killed several Cottontails and Loring got 2 *Lepus campestris*. Saw 3 Coyotes and lots of *Tamias minimus* & *S. armitatus*. Found a *Perognathus* in one of my traps. Saw some new birds along the lake. A horned grebe came up close to shore and just as I was going to annex her 2 downy young swam out from the grass one caught hold of the old bird's feathers and the other hold of it and she swam rapidly, towing them after her. Then one let go and the other climbed up on her back and crawled under her wing. She waited for the other which also climbed on her back and went under the other wing. They went under the scapulars and were entirely out of sight but the feathers were raised. The old grebe then swam rapidly with them.

and when I shot at the ♂ which kept near them, she dove and remained under water a long time, probably half a minute. When she came up the scapulars were still raised showing where the young were.

Set traps and made up skins till late. Camped near the lake with grass and good water but no timber. Bushes lining the lakeside part of the way. *Betula occidentalis* and willow are the most common. Black, yellow, and red Currants and *R. glaucum*? are abundant along the foot of the hills in places. The ~~S. t.~~ *S. castaneus* are living on them. *Amelanchier* bushes are common but the berries are small and dry.

From St. Charles northward the character of Bear Lake changes. In fact it is another lake quite separate and called Mud Lake. It is about half open water and half tule, (*Juncus baeuisti*?) The water is shallow usually 2 or 3 feet deep. It is scattered around in ponds that connect by channels. The tules are high and thick and of a black green color.

July 28 We caught 10 *Perognathus*,
some *Sitomys*, Loing got a skink &
2 *Neotomas*. Started at 9 A.M. &
reached Montpelier at noon. Got some
supplies and then turned east up
Montpelier Creek and camped about 10
miles from Montpelier. Aneroid read
6100 ⁵⁹⁵⁰ at Montpelier at camp 6750 ⁶⁶⁰⁰

At 6500 *Betula occidentalis* & *Populus angus-
tifolia* stopped and *Populus tremuloides*
& *Pseudotsuga* & *Pinus flexilis* began
in the canon.

Easy grade and not much canon
up the creek. Most of the timber has
been cut. Willows and little weathers
along the stream - Trout in it but
we got but one.

Found arvicola signs up on side
of Mts. and set a lot of traps.
Made up skins in evening till 11.

Montpelier Creek, Idaho.

July 29 Caught save *Alvicia bigicauda* & 3 *Phaenocarpus*, save *Sitomys* & 2 *Thomomys* cluseas, did not stop to make up skins. Followed up Montpelier Creek a few miles and then over a long ridge and down on another creek, then over another ridge and across another creek, over another ridge and camped near the top by a little spring. Barometer read 6550 at camp at 10 A.M. and 7500 when we camped at 3 P.M. Came about 10 miles. The mountains are not very rocky but have a good soil and are well rounded & covered with vegetation. They have been well wooded but the pine & spruce forests have been mostly burned. *Populus tremuloides* forms dense thickets & large groves ^{of dogwood} and spruce & *Pinus murrayana* & *P. flexilis* cover some of the north slopes. Streams with willows & brush line the bottoms of the gulches. Found 2 old Beaver ponds & some old cuttings along the bank.

Made up skins & set traps after camping. Killed 2 hawks & a *S. castaneus*. *Arctomys* all *canadensis* & *Sciurus*. Killed a *Peromyscus*.

Prairie Mts. Idaho

July 30 We got some ~~Sitomys~~ *Sitomys*, *Tamias* of two species, *S. castaneus* + *Sciurus* + *Thomomys*. Went up a peak S.E. of camp and saw one of the Tetons away to the north. Saw some big *Arctomys* but did not get any. Some trappers came along + told us that we are on the head of Crow Creek but still 20 miles from Star Valley.

We call it Sunday but are not very sure.

July 31 Went up on high ridge at day-light to watch for *Arctomys* + while watching Loring saw a black bear across the valley. We went after it + drove all the thicker for several miles but did not find it. Got back late + had a lot of things to skin so concluded to stay all day + set traps again. Both of us put up 18 mammals + set 65 traps.

Aug. 1, Loring caught 7 *Zapus*, 3 *Arvicola*, a *Sorex* + lot of *Sitomys*. I got a *Zapus* a *Mosorex*, 3 *Arvicola* + lot of *Sitomys*. Broke camp early and followed down Crow Creek to Star Valley. Crossed the valley to Alton and then followed

South up the valley about 8 miles & camped. Came about 30 or 35 miles. Camped at 6 P.M. & made up our mammals. Star Valley is about 6450 feet high is well watered and parts of it are fine land. Where not irrigated it is barren. Hardly a trace of upper sonoran comes into the valley. Spruces come down the cañons to the edges all around.

A few *Populus angustifolia* are the only lower zone plant noticed. *Betula occidentalis* grows along the streams.

Very few mammal signs noticed in the valley except *S. arizonae* & *Thomomys* & Badger holes. We saw one weasel.

Aneroid read 6450 in bottom of valley & 6950 at camp in S. end.

The mts. along east side of valley are higher than the Pikes Range & some of the peaks seem to have a good timberline.

Mountains

Aug. 2 The horses got lost in the brush & we did not start till about 8 o'clock. Followed up to the head of Salt Creek & then over a high ridge and down into the head of Smiths Fork, then up one of the branches and over another ridge. Came about 20 miles over some of the worst roads I ever traveled. The horses refused to haul for Gus & I had to drive over the worst of the road.

Camped on top of a divide between the heads of Smiths Fork & LaBerge Creek. Barometer read 6850 in morning when we broke camp and where we camped at 6 P.M. 9050.

The ground is trampled & eaten bare along the road by herds of sheep & horses. A drove of 120 horses is going just ahead of us, from Nevada to Oregon, to Kansas. Saw little game along the road.

a few new birds & Loring got some *D. castaneus*. After camping we went out & got some grouse & squirrels & Lagomys. Saw Deer & Elk tracks.

Wyoming Mts.

Aug. 3 Hunted before breakfast & did not get a very early start. Climbed over one range & down to a branch of Smiths Fork, then over another range & down to the head of La Barge Creek. After crossing La Barge we turned up a ravine & came a mile without any road & camped on a ridge dividing La Barge & Grays River. Heavy forests of *Picea engelmanni*, *Abies concolor*, *Pseudotsuga* & *Pinus flexilis* & *P. murrayana* cover the mts. except the parks & stream gulches.

The roads were fearful. Came about 8 miles. Barometer reads at camp 9100. Horse flies are so thick we had to build a shed of spruce boughs for the horses. Feed is splendid.

Set traps for small things & for Martens. Saw one Deer. Deer & Elk tracks are common.

A wolf howled when we started a fire in evening. The first big wolf I ever heard. Made up skins in evening.

Wyoming Mts.

Aug. 4. Caught a *Zapus* an *Arvicola*, 2 Red Squirrels, + a Martin. Loring got 7 *Zapus* + 2 *Arvicolas* + 2 *Sitomys* + shot a *Lepus bairdi*.

Made up skins, set traps + hunted. Killed 6 *Lagomys* + some *Tamias* + a *S. castaneus*. Saw *Arctomys* + a *Lepus*.

Loring took two plates of the Martin. A warm day + the flies terrible. A sprinkle of rain in P. M.

Aug. 5 Neither of us caught anything of account. Took our horses + went around 4 or 5 miles to base of the main peaks + climbed one that reached well above timberline about a mile south of Wyoming Peak. The Barometer read 9100 at camp + 11400 on top of peak. The extreme upper limit of timber on S.W. slope reached to 11000 feet. There were great banks of snow + hundreds of little streams.

The peak we were on had a broad top + was covered with grass + plants to the top. A beautiful lake lay just below the peak on the east side. It is probably 9500 feet. + a good stream runs through it.

Wyoming Mts.

The usual alpine plants were in full bloom above timber. *Oxalis*, *Ranunculus*, *Losia*, *Anemone*, *Hydrophyllum*, *Myiarrhiza* (?), dwarf composites & *Gilia* & *Carex* & *Luzula*.

Elk & deer tracks were numerous at timberline & sheep tracks above, but we saw no game. Rabbit pills were common to the top & large. There were signs of *Lepus* but we saw none. A few *Lagomys* were seen & heard. *S. lateralis* & *Sciurus* & *Tamias* were up to timberline. *Thomomys* was abundant to the top.

Otocoris were in flocks & we saw a few *Anthus* & what seemed to be a *Leucosticte*. I shot a *Spermophilus* at 10900 that seems to me a new species.

Got back at 6 P.M. Have a lot of things to make up & want to leave here in the morning.

Aug. 6 Caught a *Sorex*, a *Zapus*, a *Sitomys* & an *Arvicola*. Loring caught a lot of *Zapus*. Had a lot to do before starting & did not get started till 11:30. Followed down La Barge Creek about 6 miles & then

up a low ridge to the east and over a low divide & down to a branch of Piney Cr. With a gentle descent for about 4 miles we struck Piney Creek and following down it about 4 miles camped for the night.

Came about 15 miles I guess.

Three rain showers struck us in the afternoon and spoiled all the barometer readings. It varied up & down 300 or 500 feet at a jump without any change of altitude.

At camp on starting it read 9300 & on the divide 8900 & at camp on Piney Creek 8000. These are probably approximate.

The divide was the easiest crossed except one short hill that was so steep it stuck us & we got a traveler to haul us up with his mules ahead of our team.

Saw 2 fresh Bear tracks along road & drove the willows for about a mile along La Barge Creek but did not start one.

Passed through pretty country, meadows & parks along the streams & thick pine & spruce timber. Good grass where the sheep have not taken it all.

Saw 2 large droves of sheep.

Found *S. arvensis* & *Tamias minimus* in the lower parks.

Piney Creek

Aug. 7 Followed down Little Piney Creek about 10 miles through an open Cañon out of the mountains and out onto sage plains. Crossed some low mesas + plain to a fork on north side of Little Piney and then across more plains to Big Piney Creek and followed down it about 5 miles to Big Piney store and Post office + camped. Came 25 miles. The Aneroid worked all right again, reading at starting point on Little Piney 8000 feet, at edge of sage plains 7500, at camp on Big Piney 6400.

Conifers reached down on S.W. slopes to about 8000 feet + on N.E. slopes to 7500. Douglas spruce + *Pinus flexilis* came the lowest. *Populus tremuloides* came scarcely lower. *Populus angustifolia* was met at 6600 feet. We saw *Lagomys* at 7850. Killed one *Onychomys leucogaster* at 7850 + saw them down to 7500. Killed the first *S. elegans* at 7500 + saw them down to 6400. Saw *Cynomys* holes at 7000 + Loring killed a *C. leucurus* at 6500. Badger holes numerous.

Aug 8.

Staid all day at Big River and wrote report — I wrote 20 pages and Loring made out the bird report. Had a splendid dinner of baked Mallards.

Aug. 9 Started early, crossed the North Fork of Green River and up the east side to about a mile above where New Fork joins it and camped. Did not go over 10 miles. Found a good ford across the river with the water just the buckboard box. Saw about 40 Arctelops but could not get a shot. saw one Coyote and probably 50 Lepus campestris. Never saw them so numerous and tame before. Made up skins and set a lot of traps. Found lots of fossil wood.

Aug. 10. We caught 26 Sitomys, a Neotoma & Thomomys, and shot a lot of other stuff. Followed up New Fork 5 miles, crossing it twice & struck the Lander Road. then traveled 15 miles across dry plain with little else than stunted sagebrush. Camped on the Muddy Creek. Came about 20 miles. Killed lots of

things along the road and worked late without finishing them. Saw a lot of Antelope and 3 big wolves. Found a lot of petrified wood by the road.

A heavy frost in morning. Cool day. Barometer is cranky & jumps all around.

Aug. 11 Had to work till 10 o'clock to get our last night's specimens skinned so got a late start. Struck the Big Sandy in about 10 miles and crossing it just where it comes out of the foot hills went on about 10 miles farther, crossed the Little Sandy and camped on one of its branches a couple of miles beyond. Saw lots of Sage Grouse and some ducks. Got a Badger & Spermophile & Tamias & Loring shot an Archibuteo. Have a fine place to camp in a meadow among willows with pines on the rocks close by. Worked till late putting up skins. Came about 20 miles. Raining in evening but warm. A heavy frost & freeze in morning.

Aug. 12 We stopped to kill 3 Woodchucks and did not get off till about 8 o'clock. Crossed numerous ridges and creeks with good road except for long hills. The country is foothills along south end of Wind River Mts. and probably 7000 or 8000 feet high. Lots of rocky ledges & cañons and scattering pines over the rocky ridges. *P. flexilis* is the most common, some *P. murrayana* seen & a little spruce. Thickets of popples all along & meadows with willows along streams. Crossed the Sweetwater R. & several benches. High mesas & flat topped buttes stretch off to the south. The Wind Rivers are close on the north and quite heavily timbered along the side, reaching far above timberline.

Reached South Pass City about 3 P.M. & went on through Atlantic City & camped half a mile beyond. Got supplies but did not wait our packages.

The towns are little mining camps nearly abandoned. A store & post office in each.

Aug 13 Sunday. Mailed 7 packages & my part of the report along route to Green R. Basin. Loring has not got his bird list ready to mail. Had a poor place to camp so started on & camped in a nice little grove & meadow just past old Camp Stanbough. A heavy rain came up & we camped in a hurry & put up tent but it did not rain long. Cleared off & we had a pleasant afternoon. Did one days travel from Lander & mail.

Aug. 14 Started early & passing through the old camp of Mivres Delight crossed ~~a~~ 2 long ridges & down into Red Cañon followed it about 6 or 8 miles and then over ridges and low country to Lander where we arrived at 4 P.M. & found Dr. Bagg waiting for us. Came 30 miles with pretty good roads and a drop of nearly 3000 feet. Found plenty of *Cynomys leucurus* in valley. Lander is a nice town of probably 2000 population in a splendid farming valley. Camped at edge of town.

Lander

Aug. 15 Spent the day in making up a few mammals. Getting supplies, packing specimens & writing. Expect to leave for a two or three weeks trip to the Wind R. Mts. Warm & pleasant.

Aug. 16 Left Lander and passing through Ft. Washakie camped on Sage Creek 7 miles north of the fort. Saw Capt. Ray and got permission to camp anywhere on the reservation. A good frost in morning.

Aug. 17 Found a lot of ripe Chokecherries & currants & Bull berries along the lakeshore.

The lake is probably a mile wide in the widest place - most of the way it is narrow and crooked. It is deep with rock bottom in places. I saw an old glacier bed and at the foot of the lake is a great dam of immense boulders and debris, of the terminal moraine.

The water of the lake is very clear & quite cold. There were about 1000 Wadgers in upper end of lake & we got 4.

Camped about 2 miles above Buffalo Lake at the farthest point that a wagon can reach.

Aug. 18 The wasquitos were so thick we could not sleep & the horses were nearly crazy. Concluded to leave the wagon and pack up the gear.

Took the harness & beertop & some other things and left the wagon out in sight. Packed all the rest on two horses & followed about 3 miles up the creek & then about 2 miles up a steep slope on the south side of creek and camped in the spruce & pine timber.

Set the aneroid at 5800 at the Lake, which Capt. Ray says is the altitude.

At camp in the pines it read 7800.

Saw fish deer & elk tracks & a bear track. A lot day.

Aug. 19 Went up the mountain about 2000 feet above camp with Dr. Bagge.

Killed some Lagomys only. Saw no large game but a few deer, elk, & bear tracks. Wrote a report & got things ready to go up the Mts. Tomorrow.

Aug. 20. Dr. Bagge & I took our saddle horses & a pack horse with rods & provision & traps and followed up the ridge and over the tops of two ridges

and camped in a great open basin or park at 10000 feet. There are a lot of little lakes in the park, & marshes & streams. and a crest of rough Mts. half enclose it. They reach above timberline and great banks of snow lie on N.E. slopes. Camped in the basin & set traps above timberline.

Saw a Gizzly and fired 3 shots at him but could not stop him. He was above timberline turning over stones to get ants. Was a good sized silver tip in fine pelage but looked gaunt & rangy. He ran fast.

Set 18 traps above timberline. Killed a few small things.

Rained by spells.

Aug. 21 Caught only Arvicolas at timberline went up on a peak to 11800 feet and Dr. Bagg shot a warden and saw 3 wrens chasing Lagomys among the rocks. Saw no large game but saw birds & Lagomys & saw woodchuck dig & heard them whistle at 11700. Set traps in park, saw a Talpa meadow. Rained in P.M. Cold.

Wind River Mts.

Aug. 22 The horse-flies were so bad yesterday the horses could not stand it. We had to blanket them + tie them in the shade.

Concluded not to stay any longer so packed our horse + started down to camp. Shot an *Arctomys* + *Tamias*. Caught some *Arvicola* + *Sitomys*. A Fox carried off some of my traps.

On the way down we shot a *Dendrogeomys*. Reached camp at 1 o'clock + skinned my mammals before dark.

Aug. 23. Moved camp from 7700~~0~~ up to 9600 feet. Camped at a spring only 400 feet below N.E. timberline.

Aug. 24 Caught some *Lepus bairdi* + other things + made up a lot of skins a hard frost.

Aug. 25 Did not catch much. Went down to where we left the wagon + found everything all right.

Aug. 26 Dr. Baggo Loring went over to the next ridge + camped above timberline.

Aug. 27. joined them at timberline.

Killed a Badger

Aug. 28 Came back to camp. Loring got a Fox.

Aug. 29 Packed down to the wagon at Lake.

Lander

Aug. 30 Came from the upper end of Bull Lake to Ft. Washakie. Rained in P.M. & all night.

Aug. 31 The roads are very muddy & bad. Reached Lander at 3 P.M. & got mail.

Sept. 1 Made out reports & got some necessary supplies & wrote some.

Sept. 2 Finished reports & packed specimens. Loring is sick & not able to do much.

Sept. 3 Sunday. A quiet day in camp.

Sept. 4 Packed up & started for South Pass to get *Sciurus*. Dr. Bagg & Loring start north for larger game near the head of Wind River.

Gus & I followed our back track through Red Cañon & camped on the next stream after passing out of the Cañon. Camped at 7000 feet. Killed a *S. 13lineatus pallidus* & caught a *Thomomys clusens*. A hot day & all up hill.

Distances

Ogden to Bear Lake (Laketown)	80
Laketown to Montpelier	30
Montpelier to Afton	50
Star Valley (Afton) to Big Piney	75
Big Piney to South Pass	75
South Pass to Lander	40
Lander to Bull Lake Camp	50
Lander to Buffalo	265
Buffalo to Powder River	50
Powder River to Moorcroft	90
Moorcroft to Newcastle	50
	<hr/> 855

Sidetrips

110

Near South Pass

Sep. 5 Came 5 or 6 miles & camped on a little Creek about 2 miles west of Miners Delight. Judging from the maps & distances along the road it is about 6 miles north of South Pass City.

There are groves of Douglas Spruce & *Pinus flexilis* & *P. murrayana* on the side hills & *Sciurus fremonti* are common in them. Shot 7 in one small grove & in all killed 10. Shot the 10 squirrels, one *S. elegans*, 3 *Tamias minimus*, & a Sagehen with the arrow & did not miss a shot or fail to kill dead. Camped at 8000 feet.

Sep. 6 Killed 9 *Sciurus*, 1 *Tamias*, caught an *Arvicola* & a *Sitomys* & 9 ~~*Peromyscus*~~ ^{*Microtus*}. Made up 14 mammals & 2 birds.

Sep. 7 Caught 8 more ~~*Peromyscus*~~ ^{*Microtus*} & *Thomomys*. Shot 2 *Sciurus*. The wind blew so I could not find *Sciurus* & in P.M. it grew into a gale with some rain & turned cold.

Caught a Badger. Made up 21 mammals.

Sep. 8 Snowed by spells all night, cold, windy, started at 7 & reached Lander at 2 P.M. warm in valley. Got 3 *Peromyscus* & 1 *Sitomys*.

Sep. 30 Dr. Merriam left yesterday from Osage where we camped over night. Rained & blew in night so I could not get Red squirrels or Chipmunks. Made up skins & started for New Castle where we arrived at noon. Found Mr. Bissell & Mr. Mordell & soon found a place to pasture horses & store outfit. Disposed of all before 5 P.M. but still had my specimens to pack & ship.

Saw about 12 *Sialia sialis*, & 26 *Cyanoccephalus cyanocephalus*, & 2 *Pica rustica hudsonica*.

Artemisia tridentata, *carya*, & *frigida* are abundant to Newcastle.

Went to the
Owl Creek
Brigham 12
Brigham 12
Redbank
Brigham 12
Borden 12
Sullivan 12
Thomson
Merriam

OWL CR. AITS.

with C. H. M.
Sept 8 to 29
E. F. P.

